

Abstract**A study on potential drug – drug interaction among prescriptions dispensed at State Pharmaceuticals Corporation, Anuradhapura**

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Abstract**Background**

The drug-drug interactions (DDI) are a common cause for medical error. Our aim was to find the frequency and severity of potential DDI in prescriptions dispensed at State Pharmaceuticals Corporation (SPC), Anuradhapura.

Methods

A cross sectional study was conducted at SPC, Anuradhapura. Ethical clearance was obtained from the Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka. Medscape drug interaction checker was used to identify potential DDI. There are three types of interactions; serious, significant and minor.

Results

Thousand prescriptions over a period of four months were collected. There were 1376 potential drug interactions in 466 prescriptions with a mean of 1.4 (SD 2.4) per prescription. There were 94 (6.8%) serious, 1017 (73.9%) significant and 265 (19.3%) minor DDI. The maximum amount of DDI per prescription in serious, significant and minor was 05, 15 and 04 respectively. The total maximum DDI was 21. DDI involved 178 drugs. Respectively, methotrexate (MTX) (10%), aspirin (11%) and metformin (10%) were the most frequently implicated drugs in serious, significant and minor interactions. Common serious pharmacokinetic DDI are MTX-meloxicam, clopidogrel-omeprazole, clopidogrel-esomeprazole and pharmacodynamic DDIs are MTX-leflunomide, atorvastatin-vitamin B3 and atorvastatin-fenofibrate. The most common potential DDI was aspirin with losartan caused by dual mechanism; a pharmacodynamic antagonism and increase in serum potassium (4%).

Conclusion

Potential drug-drug interactions are common and prescribers need to use a device such as mobile app to check and prevent it.

Key words: Potential drug interactions; Medical errors; Mobile apps for DDIs

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